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THE SILVER INSTITUTE LETTER

INFORMATION ON SILVER FOR INDUSTRY

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SHIMMERING SILVER FISHING LURES FOR FRESH AND SALT WATER FISHING

Chicago Chinook fish, above, *caught in Lake Michigan with silver "Champ" lure,* below.

The gleaming silver lure, shown below left, is called "Mr. Champ" by its manufacturer, the **Weber Tackle Company,** Stevens Point, Wisconsin 54482, and is one of more than 50 silver plated lures of different styles and weights.

The 1/12 to 1/4 ounce silver Mr. Champ lures fill the needs of the ultra-light angler, and according to Weber, it is a superb lure for white bass, perch and trout. The 1/3 through 7/8 oz. Champs are good all-round sizes for general fresh water fishing, with the 7/8 oz. size being particularly popular in the Great Lakes because of the great casting distances and depths this lure will achieve. Silver plated 1 to 4 oz. Champs are designed primarily for salt water fishermen.

Silver is used for fishing lures, as well as for mirrors, and solar energy systems, because it is the best reflecting material. Silver's reflectance of light is 30% greater than aluminum, 33% greater than copper, 48% greater than nickel and 72% greater than chromium!

Fishing lures are only a few of the millions of products which are improved by plating with pure silver. Just in the last seven years, 97 new advances have been made in improved silver plating throughout industry as summarized in the Silver Institute's quarterly publication, NEW SILVER TECHNOLOGY. Among the most recent developments are: a new way to plate pure silver onto inert plastic materials which was developed by Lawrence M. Schiavone of Bell Telephone Laboratories, Inc., 600 Mountain Avenue, Murray Hill, New Jersey 07974; a silver electroplate, containing tin, which is unusually resistant to corrosion and tarnish and has excellent soldering properties, which was developed by Wladyslaw Reksc of the Podtswowej Chemical Politechnical Institute of Posnan, Poland; and improved transistors now made possible by a new silver plating developed by Kiyomitsu Oi of Mitani Shindo Co., 1 Kitahanana-Cho Kamitoba, Minami-Ku Kyoto 601, Japan.

In the United States alone, more than 8 million troy ounces of silver per year have been used in making silver plated products.

BON DEL WATER FILTERS USE SILVER AS BACTERIOSTATIC AGENT

Behind the dramatic success of one of the world's most popular bacteriostatic water filter products are Mr. and Mrs. Ray Ward, 10,000 distributors—and silver. Before creating **Bon Del, Inc.,** P.O. Box 1461, Mesa, Arizona 85201 in 1977, Ray Ward studied the use of silver as a purifier, starting with findings dating back to the days of the Roman Empire and moving on to silver's proven efficacy as a bactericide in today's biomedical applications. Adding to this knowledge, Mr. Ward carried out his own research and development program, which led him to build a water filter unit using as a filtering bed, activated carbon with silver bonded to it as a bacteriostatic agent.

First produced in the kitchen of the Ward home, the Bon Del Countertop unit which sits on the counter next to the sink and is quickly attached to the faucet with a diverter valve, a tourister portable unit, and a refrigerator unit which attaches in-line for use on drinking fountains, refrigerator ice makers and water dispensers, are all now manufactured in modern plants in Mesa, Arizona and in Victoria, British Columbia, Canada. Mr. Ward calls silver "the most consistent bacteriostatic agent", and adds that it inhibits the growth of bacteria within the unit when water is allowed to stand over-

night or over longer periods of time. To accomplish this, the Bon Del filtering bed contains 1.05% pure metallic silver.

Mr. Ward noted, "The granular activated carbon within the unit removes the objectionable tastes and odors found in our drinking water systems where chemicals and chlorine have been added. Along with silver and carbon, we have included within our unit a pair of 5 micron filter discs which aid in the removal of particulate matter before it gets to the filter bed. We also have a patented micron scrubber action which increases the life of the micron filter discs."

In February, 1980, the company received Environmental Protection Agency (E.P.A.) registration numbers on the units being manufactured and sold by Bon Del. And in Canada, the Bon Del Water Filter was recently tested by Health and Welfare of Canada, according to Mr. Ward, and was found to be the "most consistent bacteriostatic water filter that they have ever tested", and was recommended for use on Canadian Coast Guard lighthouses. The Bon Del Water Filter is also being used by the Finnish Army and in hospitals in Finland. These silver-assisted filters are now being increasingly purchased by people who like good-tasting, clean, good-smelling, clear, drinking water in other European nations, 10 South American countries, 2 in Central America, the Philippines and Singapore, as well as in Canada and the United States.

NEW MEMBER WELCOMED

The Silver Institute warmly welcomes to membership, **Asamera Inc.**, c/o **Minera San Pedro Analco, S.A. de C.V.,** 1730 Av. Libertád, Sector Juárez, Guadalajara, México, with its Vice President Mining, Ralf M. Kleine, as its Official Representative in Institute affairs.

ELEGANT SILVER SETS OFF LUXURIOUS PALACE

Noted for its artistry, craftsmanship and quality, Reed & Barton's silver was chosen by famous New York developer, Harry B. Helmsley, to add one final touch of elegance to his uniquely luxurious hotel, **The Palace,** located at 455 Madison Avenue in New York City.

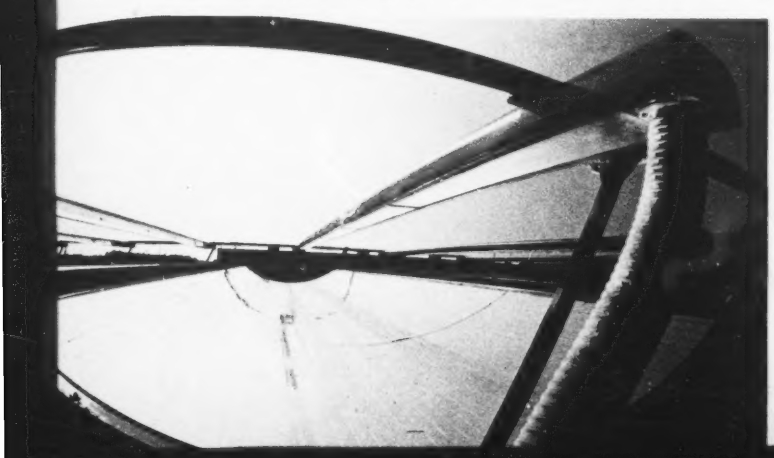
Within the imposing combination of a 560 foot glass tower and the cluster of Italianate brownstone mansions that form this recently inaugurated 1,100 bedroom hotel, Reed & Barton's King pattern of heavy silver plated flatware serves diners in the Trianon–the main dining room–and in the luxurious Gold Room where afternoon tea is served with Reed & Barton's finest gracefully regal holloware, plated with pure silver and decorated with a crown and the words "The Palace" etched underneath.

And when dining in the soft glow of candle light, the candles are placed in one of the 100 heavily silver plated, ornate candelabras from Reed & Barton. Additional super-sized candelabras were also commissioned by The Palace and are being crafted by **Reed & Barton Corporation,** 144 Britannia Street, Taunton, Massachusetts 02780.

SILVER'S IMPORTANT ROLE IN DISNEY WORLD'S SOLAR ENERGY SYSTEM

Silver-backed mirrors are helping **Walt Disney World,** P.O. Box 40, Lake Buena Vista, Florida 32830 to accomplish the seemingly impossible–the use of the hot Florida sun to produce enough cold air to air-condition a two-story office building.

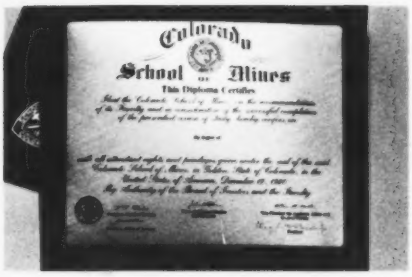
With silvered solar reflectors forming the roof (pictured at left) of Disney World subsidiary, **Reedy Creek Utilities Co.,** the building's solar energy system generates enough hot water–by multiplying the intensity of the sun by eight times as its rays are concentrated onto water filled collector bars–to provide from 80 to 85% of the air-conditioning needs for the year and *all* the heat and hot water needed.



Silver has also been used by the producer of Disney's solar energy system, **AAI Corporation,** P.O. Box 6767, Baltimore, Maryland 21204, a subsidiary of **United Industrial Corp.,** to create other similarly effective systems for, among others, two Maryland Schools and a concrete block factory in Pennsylvania.

SILVER TRADITION PRESERVED

When it appeared that the **Colorado School of Mines** might have to abandon the awarding of silver diplomas, the tradition was preserved by **ASARCO Incorporated,** 120 Broadway, New York, N.Y. 10271, the country's largest refiner of silver. Professional and graduate degree students had received sterling silver diplomas, like the diploma pictured at left, since 1934. The diplomas measure 5½ by 4⅞ inches by 1/64 inch thick.



After ASARCO arranged with the school's board of trustees to provide or pay for the silver used to produce the diplomas, Ralph L. Hennebach, President of ASARCO, INC. and member of the Colorado School of Mines Class of '41 and recipient of a treasured silver diploma, commented, "It is entirely appropriate that the graduates of the nation's foremost mineral engineering school get a special, lasting symbol of the achievement. It might be more pragmatic to donate money to the mining and metallurgy departments, but I just think that the silver diploma is an important distinctive symbol of a fine accomplishment."

MANY BEAUTIFUL AND ARTISTIC SILVER COINS ISSUED IN 1980

Silver coins were struck to celebrate Hanukka and–for the first time, Christmas–in 1980. Minted by the **Royal Canadian Mint,** the year's Israeli coin marking the celebration of Hanukka, the Festival of Lights, is in 850 fine silver, measures 30 millimeters in diameter and weighs 14.4 grams. This coin features a lamp from the Greek island of Corfu, honoring the island's Jewish community that perished during the Nazi Holocaust, and has a face value of 1 Shekel.

While the Hanukka coin is already a tradition in Israel, **the first silver coin to be issued specifically for the Christmas Season** and to refer to this both in the design and description is the Christmas Coin, *pictured below,* issued by the Isle of Man in 1980. This sterling silver coin, weighing 15.50 grams, has a face value of 50 Pence and features an artist's impression of a Dickensian Coach and Horses and the arrival of the paddle steamer, "Mona's Isle" from Liverpool with the Christmas Mail in December 1830. This Christmas coin was struck by the **Pobjoy Mint,** Mint House Oldfields Road, Sutton, Surrey, England.

After four years of research, **Valcambi S.A. of Switzerland** minted 10,000 collections of ten coins of the Cayman Islands, honoring the **37 Kings of England.** Each coin has a face value of $25, has a diameter of 42 millimeters, weighs 5[illegible]0 grains and is of 500 fine silver. The coin *pictured below* shows four Kings of the House of Windsor–Edward VII, 1901–1910, George V, 1910–1936, Edward VIII, January–December 1936 and King George VI, 1936–1952–while other coins in the series show from two to four kings, including the Anglo-Saxon kings Edward the Confessor and Harold II (dating back to 1042) and on through history's pageant of Royal Houses. Additional information may be obtained from Mr. Doug Galusha, Paramount International Coin Corporation, one Paramount Plaza, Englewood, Ohio 45322.

Other beautiful silver coins were issued in 1980 by Bolivia, which commemorated the International Year of the Child by minting a 200-boliviano coin depicting a person playing a guitar-like musical instrument and two children dancing; Hungary which issued silver coins to honor its own silver medal winners in the Ice Dancing competition at the 1980 Lake Placid Winter Olympic Games; and by many other countries ranging in size from the vast area of the Soviet Union to the tiny mountaintop state of San Marino which issued a 500 Lire coin to celebrate the XXII Olympic Games in Moscow and a 1000 Lire .835 silver coin honoring St. Benedict of Norcia.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of **999 Silver Bars** by All Known Refiners in the United States

	TROY OUNCES		MILLION TR. OZ.	
	December 1980	Full Year 1980	1980	**1979
			Monthly Rate	
THESE REFINERS' PRODUCTION, BY SOURCE				
From Primary (ores & concentrates)	4,042,426	40,476,112	3.4	4.8
From Coins	682,706	17,399,257	1.4	0.4
From Old Scrap (used photo film & other products)	6,220,822	74,849,296	6.2	5.1
From New Scrap (in-plant clippings, waste)*	3,607,192	33,601,718	2.8	2.3
TOTAL PRODUCTION	14,553,146	166,326,383	13.9	12.6
TOTAL PRODUCTION Less New Scrap*	10,945,954	132,724,665	11.1	10.3
ABOVE TOTAL PRODUCTION, BY OWNERSHIP				
From Refiners' Own or Purchased Materials	10,656,072	109,944,155	9.2	8.9
Refined on Toll for Others	3,897,074	56,382,228	4.7	3.7
DISPOSITION BY THESE REFINERS				
Converted in Plant (consumed in fabricating, etc.)	5,814,082	58,635,093	4.9	3.1
Shipped Out: Own materials	5,125,578	54,175,379	4.5	6.9
Against Tolls	3,754,003	53,983,574	4.5	2.7
TOTAL DISPOSITION	14,693,663	166,794,046	13.9	12.7
TOTAL DISPOSITION Less New Scrap*	11,086,471	133,192,328	11.1	10.4
		TOTAL FOR PERIOD		
RESULTING CHANGE OF THESE REFINERS' STOCKS (Production Minus Disposition)	−140,517	−467,663	−0.5	−1.3
THESE REFINERS' STOCKS AT END OF PERIOD	1,102,025	1,102,025	1.1	1.5

Production and Disposition of **999 Silver Bars** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa and Sweden; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TR. OZ.	
	December 1980	Full Year 1980	1980	1979
			Monthly Rate	
THESE REFINERS' PRODUCTION, BY SOURCE				
From Primary (ores & concentrates)	10,648,459	143,937,820	12.0	12.7
From Coins	193,566	864,500	0.1	0.0+
From Old Scrap (used photo film & other products)	6,329,797	92,071,562	7.7	4.1
From New Scrap (in-plant clippings, waste)*	1,427,089	17,251,030	1.4	0.8
TOTAL PRODUCTION	18,598,911	254,124,912	21.2	17.6
TOTAL PRODUCTION Less New Scrap*	17,171,822	236,873,882	19.7	16.8
ABOVE TOTAL PRODUCTION, BY OWNERSHIP				
From Refiners' Own or Purchased Materials	15,031,092	207,551,924	17.3	15.2
Refined on Toll for Others	3,567,819	46,572,988	3.9	2.4
DISPOSITION BY THESE REFINERS				
Converted in Plant (consumed in fabricating, etc.)	5,564,434	85,627,877	7.1	4.3
Shipped Out: Own materials	11,133,896	125,151,536	10.4	11.3
Against Tolls	3,540,450	41,041,393	3.4	2.0
TOTAL DISPOSITION	20,238,780	251,820,806	21.0	17.6
TOTAL DISPOSITION Less New Scrap*	18,811,691	234,569,776	19.5	16.8
		TOTAL FOR PERIOD		
RESULTING CHANGE OF THESE REFINERS' STOCKS (Production Minus Disposition)	−1,639,869	+2,304,106	+2.3	+0.4
THESE REFINERS' STOCKS AT END OF PERIOD	7,632,021	7,632,021	7.6	5.3

* PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes; since it is in continuous cycle from new scrap to 999 silver, to new scrap, some like to see the production and disposition totals after deducting the new scrap from both.

** Revised

THE SILVER INSTITUTE

A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS

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1001 Connecticut Avenue NW, Washington, D.C. 20036. Tel. (202) 331-1485 and 331-1228

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